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FINAL PROPOSED PLAN FOR SITE 16 NAS WHITING FIELD FL
8/13/2008
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In accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Section 300.430(f) and Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), this document summarizes the Navy's Preferred Alternative for OU 15 - Site 16 (Open Disposal and Burning Area) at NAS Whiting Field.



Comments

The Navy will be accepting written comments (see insert) from August 15 through September 14, 2008. The comment period includes an opportunity to request a public meeting at which the Navy would present more detailed site information. A meeting will be held if there is a request from members of the public before the end of the comment period.

All comments will be considered before a final decision about site cleanup is reached.

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PROPOSED PLAN

August 2008

OU 15 - Site 16, Open Disposal and Burning Area

The Department of Defense and the Navy have completed the investigation of surface and subsurface soil at Naval Air Station Whiting Field Operable Unit 15 - Site 16, Open Disposal and Burning Area. The site history and current conditions indicate that a response action is necessary, and future land use will be restricted to non-residential and non-recreational activities by Land Use Controls.

Introduction

In accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Section 300.430(f) and Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), this Proposed Plan identifies the Preferred Alternative to address contaminated surface and subsurface soil at Operable Unit (OU) 15 - Site 16, Open Disposal and Burning Area, at Naval Air Station (NAS) Whiting Field (Figure 1).

Cleanup of contaminated groundwater at Site 16 is being addressed separately as part of the NAS Whiting Field base-wide groundwater investigation (Site 40).

This Proposed Plan was developed by the United States Navy, the lead agency, to fulfill public participation requirements under CERCLA and the NCP. It was finalized with approval from the United States Environmental Protection Agency (USEPA), a support agency, and concurrence from Florida Department of Environmental Protection (FDEP), a support agency. The Navy and USEPA will select the final remedial action for Site 16 after considering and addressing significant comments from the public.



Figure 1 - Site 16 Location Map

The final remedial action will be selected to ensure protection of human health and the environment and will be detailed in a Record of Decision (ROD) document for the site. The Proposed Plan and ROD will be published as a permanent part of the Administrative Record for NAS Whiting Field.

This Proposed Plan summarizes information found in greater detail in the *Remedial Investigation (RI) Report, Site 16*; the *Feasibility Study (FS) for Surface and Subsurface Soil, Site 16*; the *Feasibility Study Addendum (FSA) for Surface and Subsurface Soil, OU 15 - Site 16, Open Disposal and Burning Area*; and other site documents. These materials are available for review at the **NAS Whiting Field Information Repository, West Florida Regional Library, Milton Branch, 805 Alabama Street, Milton, Florida, 32570; (850) 623-5565.**

The public is invited to participate in the remedy selection process by reviewing and commenting on any and all alternatives. New information or comments received by the Navy during the public comment period could result in the selection of a remedial action that differs from the Preferred Alternative.

Site Background

Location: Site 16 is approximately 12 acres in size and is located in the southwestern part of the facility, directly west of the South Air Field. At the time of the RI field activities, Site 16 was forested with pine trees. The land surface at the northern end of the site slopes gently to the west toward Clear Creek which is located 450 feet west of the site. The approximate location of the site is shown on Figure 1.

Operational and Waste Disposal History: From 1943 to 1965, the Site 16 area served as the primary waste disposal area for NAS Whiting Field. Two large pits were used for the disposal of general refuse and waste from aircraft maintenance operations. Other wastes associated with aircraft maintenance and repair including paints, solvents, waste oil, hydraulic fluid, and wastewater from paint stripping operations were reportedly disposed at the site. Dielectric fluids containing polychlorinated biphenyls (PCBs) may also have been disposed at the site. Annual disposal volumes are estimated to have been between 3,000 and 4,000 tons. To help reduce volumes, solid wastes were routinely burned using diesel fuel as an accelerant.

Site Characteristics

Current Conditions: There are currently no buildings at Site 16. Vegetation at the site consists of sparse native grasses and abundant or dense scrub oak vegetative cover in the central area. The boundary areas are predominantly covered with pine trees and dense scrub oak. There is no surface water at Site 16 and currently

ground surface at the site is slightly depressed and encircled by a raised, unimproved dirt road (Figure 1).

The entire area for Site 16 is vacant, unused land at this time.

Investigation Activities

The RI at Site 16 was conducted in phases from 1992 through 2001. Fieldwork included a range of environmental studies to collect the data needed to determine the presence, nature, and extent of contamination. The field activities included the following:

Surface Soil Sampling: Conducted to determine surface soil characteristics and contaminant concentrations by laboratory chemical analysis.

Subsurface Soil Sampling: Conducted to characterize waste material within the landfill. Test pits were excavated at locations where geophysical anomalies identified potential locations of buried materials. The subsurface soil data set for Site 16 consists of one subsurface soil sample collected from each of five test pits.

Interim Remedial Action: In May 2002, an Interim Remedial Action (IRA) was conducted at Site 16 to address surface soil with concentrations of benzo(a)pyrene exceeding the associated USEPA Region 9 residential preliminary remediation goal (PRG) of 62 micrograms per kilogram ($\mu\text{g/kg}$). Approximately 67 cubic yards (95 tons) of non-hazardous soil were removed. Prior to completing backfilling, two subsurface soil samples were collected at the bottom of the excavation area and analyzed for polynuclear aromatic hydrocarbons (PAHs). The soil sampling results indicated benzo(a)pyrene slightly exceeded the residential Soil Cleanup Target Level (SCTL) (FDEP, 2005) in one post-excavation sample. All soils with concentrations exceeding industrial level SCTLs or PRGs were removed during the IRA. After backfilling was complete at Site 16, fertilizer was applied to the surface soil at the same elevation as the surrounding surface. No sod was placed on the surface soil at Site 16 because of its remote, wooded location.

Investigation Findings

The RI Report provided an understanding of soil conditions at Site 16. Groundwater conditions at Site 16 will be investigated and evaluated separately in the base-wide groundwater investigation (Site 40). After the RI Report was completed in 2000, an FS was conducted to identify the best approach to address the soil contamination at the site.

Since 2000, the following site conditions changed:

- Arsenic, originally identified in the FS as a constituent of concern (COC), was determined to be naturally occurring at Site 16 and other areas at NAS Whiting Field (*Analysis of Soil for Arsenic at NAS Whiting Field* - FDEP, 2001).
- USEPA changed its screening criteria for evaluation of hazardous waste-related sites (Region 9 PRGs replaced Region 3 RBCs).

Based on updated site conditions, an FSA was prepared in 2008. The current findings of environmental conditions at the site are summarized below.

Soil Conditions: The following constituents were detected in

surface soil prior to the IRA at Site 16 at maximum concentrations exceeding direct contact, residential screening levels and were retained as constituents of potential concern (COPCs) for surface soil at Site 16:

- carcinogenic PAHs (cPAHs)
- Pesticides - dieldrin
- PCBs - Aroclor-1254 and Aroclor-1260
- Inorganics - antimony, barium, cadmium, chromium, copper, lead, and mercury

Concentrations of cPAHs exceeded both residential PRGs and SCTLs. Concentrations of Aroclor-1254, Aroclor-1260, and chromium exceeded both PRGs and SCTLs. Concentrations of dieldrin also exceeded the PRG and SCTL. Concentrations of antimony exceeded the PRG only. Concentrations of barium and copper exceeded SCTLs, but were less than PRGs. The maximum concentration of mercury exceeded the SCTL only.

The following constituents were detected in subsurface soil (below 1 foot bls) at Site 16 at maximum concentrations exceeding residential screening level concentrations, and they were retained as COPCs for subsurface soil at Site 16:

- cPAHs
- Inorganics - barium, cadmium, chromium, copper, and lead

Concentrations of cPAHs and chromium exceeded both residential PRGs and SCTLs. Concentrations of barium exceeded SCTL, but were less than PRGs. Concentrations of cadmium exceeded the PRG, but were less than the SCTL. Concentrations of copper exceeded both the PRG and SCTL.

There are no principal threat wastes present in surface or subsurface soils at Site 16.

Scope and Role of OU 15 – Site 16

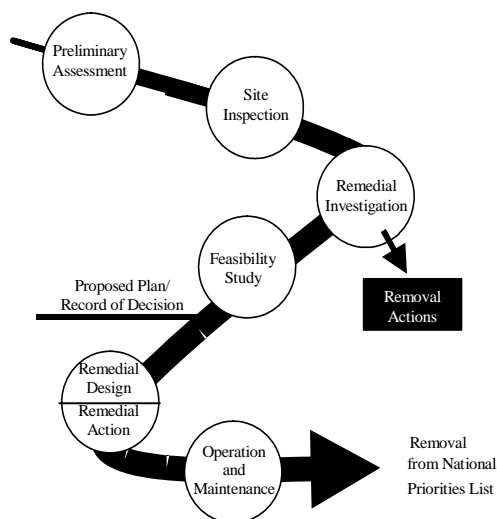
Regulatory Framework

NAS Whiting Field was placed on the USEPA National Priorities List (NPL) for environmental study and cleanup in June 1994 based on evidence of past historical releases into the environment of CERCLA hazardous substances.

Environmental work at OU 15 - Site 16 is part of the Navy's ongoing Installation Restoration Program that includes 27 OUs at NAS Whiting Field. OU 15 - Site 16 is the 24th OU to be addressed at the facility. This is a Department of Defense program to investigate and, if necessary, address conditions related to suspected past releases of hazardous substances at military facilities.

Environmental investigation and cleanup work at the facility is being conducted in accordance with the

requirements of CERCLA; the Department of Defense Environmental Restoration Program (DERP); Executive Order 12580; USEPA-issued CERCLA guidance and, where practicable, the NCP; and other federal and State environmental and facility siting laws, regulations, guidance, and policies to the extent required by CERCLA. The CERCLA process is typically completed in the following stages:



Summary of Site Risks

The data collected during the RI at Site 16 were used in preparing a human health risk assessment (HHRA) and ecological risk assessment (ERA) to determine if soil contamination at the site results in risks to human health or the environment. Following all risk assessment calculations, several COCs were identified in surface soil at concentrations greater than FDEP SCTLs and USEPA PRGs for protection of human health and the environment under a residential land use scenario. Constituents identified as COCs in surface soil include cPAHs, barium, copper, and lead. Barium, copper, and lead were also identified as COCs in subsurface soil at Site 16.

Current and Future Land Uses: The current and future anticipated land use at Site 16 is non-residential/non-recreational.

Human Health Risks: The HHRA evaluated the risk associated with cancer-causing (carcinogenic) constituents as well as those constituents associated with non-cancer adverse health effects via potential exposure pathways (ingestion, inhalation, or dermal contact) at Site 16. Based on the findings of the HHRA, unacceptable carcinogenic risk was identified for one (the hypothetical future resident) of the five receptors evaluated (hypothetical future residents, typical industrial workers, construction workers, recreational users, and trespassers) exposed to surface soil.

Cancer risk estimates for four of the receptors exceed the State of Florida cancer risk benchmark of 10^{-6} (Chapter 62-785.650, F.A.C), but none of the risk estimates exceed the USEPA cancer risk range (10^{-4} to 10^{-6}). The primary risk drivers for surface soil were cPAHs.

For non-cancer-causing constituents, the measure of the likelihood of adverse effects occurring in humans is called the Hazard Index (HI). An HI greater than 1.0 suggests that adverse effects are possible. At Site 16, non-cancer risk estimates (i.e., the HIs) did not exceed 1.0 for any of the receptors evaluated. Consequently, adverse non-carcinogenic health effects are not anticipated for exposure to surface and subsurface soil at Site 16 under a residential land use scenario.

Ecological Risks: The quantity of the terrestrial habitat at Site 16 is limited. In the early 1990s, Site 16 consisted of overgrown shrubs and planted pine trees approximately 25 to 40 feet in height. Construction debris was present on the ground surface at the site. The site is currently comprised of vacant, unused land with some shrubs and trees. No ecological risks were identified for surface or subsurface soil at Site 16.

Conclusion: Based on USEPA risk assessment guidance, remedial action is not generally warranted at sites where cumulative risk does not exceed the 10^{-4} to 10^{-6} risk range. However, the guidance also stipulates that risk less than 10^{-4} may still be considered unacceptable for site-specific reasons. At Site 16, the suspected presence of buried wastes and debris create the significant possibility that an unacceptable risk will occur if these materials are exposed during excavation or if soil erosion occurs. These site uncertainties warrant implementation of a remedy that precludes potential future exposure to soils at Site 16.

Considering these factors, it is in the lead agency's (Navy) current judgment that the Preferred Alternative (LUCs) identified in this Proposed Plan is warranted and necessary to protect public health, welfare, or the environment from past or potential releases of hazardous substances at this site.

Remedial Action Objectives

The FSA identified the following Remedial Action Objectives (RAOs) to describe what cleanup is expected to accomplish at Site 16:

- Protect human health from carcinogenic risks associated with incidental ingestion of, inhalation of, and dermal contact with soil contaminated with cPAHs and exposure to buried waste and debris at the site.
- Protect human health from risks associated with incidental ingestion of, inhalation of, and dermal contact with soil contaminated with barium, copper, and lead and exposure to buried waste and debris at the site.

Cleanup goals (CGs) are determined based on Applicable or Relevant and Appropriate Requirements (ARARs) and TBC criteria, COCs, and exposure pathways. The CGs for Site 16 soils were formulated based on the following criteria: FDEP SCTLs for

residential exposure (FDEP, 2005), and USEPA Region 9 PRGs (USEPA, 2002). The CGs are listed below.

- cPAHs – 0.062 mg/kg (USEPA Region 9)
- Barium – 120 mg/kg (FDEP SCTL)
- Copper – 150 mg/kg (FDEP SCTL)
- Lead – 400 mg/kg (FDEP SCTL)

Based on the RAOs and cleanup goals, the FSA estimated the area and volume of contaminated soil requiring remedial action at Site 16 as approximately 507,600 square feet and 37,600 cubic yards, respectively.

Summary of Alternatives

The remedial action alternatives evaluated for soil contamination at Site 16 included no further action (NFA), land use controls (LUCs) as a limited action alternative, a soil cover as a containment alternative, and soil removal and off-site disposal as a treatment and removal alternative.

The remedial alternatives evaluated for possible selection were as follows:

Alternative S16-1: No Further Action

The NCP requires that a no-action alternative be considered as part of the evaluation of alternatives. In an FS, the no-action or NFA alternative is typically considered to serve as a baseline consideration or to address sites not requiring any active remediation.

Under the NFA alternative, no additional remedial activities would be undertaken at the site. Because no active treatment, LUCs, or site monitoring measures would be employed to preclude unacceptable human health risks from future exposure to surface and subsurface soil contamination exceeding FDEP's residential SCTLs, this alternative would not meet the RAOs for Site 16.

There would be no cost for Alternative S16-1.

Alternative S16-2: Land Use Controls

Alternative S16-2 would address threats through the implementation of LUCs for surface soil. This alternative would consist of LUCs in the form of institutional controls (ICs) and an Engineering Control (EC) at the site.

ICs in the form of a residential and/or residential-like use prohibition, a recreational use prohibition, a digging prohibition, and restrictions on activities that would disturb the site or future signage without prior regulatory notice and concurrence would be implemented to ensure appropriate future land use. Prohibited uses of the site would include, but would not be limited to, residential housing, elementary and secondary schools, child care facilities, playgrounds, and adult convalescent or nursing home facilities.

ECs in the form of warning signs posted along the boundaries of the site would also be implemented. The location, size, and wording to be used on those signs would be agreed on by the Navy, USEPA, and FDEP prior to their posting.

The estimated capital cost of the initial implementation of the LUC alternative is \$21,000. The long-term operation and maintenance (O&M) cost, including the cost for 5-year reviews, would result in a 30-year total Net Present Worth (NPW) of \$103,000. NPW cost is the total cost of an alternative over time in terms of today's dollar value.

Alternative S16-3: Soil Cover and LUCs

The containment alternative developed for Site 16 would include all components of Alternative 2 in addition to a soil cover. Containment alternatives require no treatment of contaminated materials. Under this alternative, a cover system would be constructed over the former disposal areas to reduce the infiltration of precipitation, control surface runoff, and minimize potential direct contact risks. Minimizing infiltration from precipitation and surface water reduces contaminant leaching from soil and landfill wastes to groundwater. Prior to cover placement, the site would be cleared, grubbed. Also, any debris piles would be removed. To minimize storm water infiltration and cap erosion, the soil cover would be graded.

The soil cover would consist of clean fill placed and compacted in 6-inch lifts to a minimum thickness of 18 inches. Six inches of topsoil would then be placed on top of the clean fill for a total cover thickness of 24 inches. Once in place, the soil layer would be fertilized and seeded to promote vegetative cover.

The estimated capital cost of the initial implementation of the soil cover and LUC alternative is \$979,000. The long-term O&M cost, including the cost for 5-year reviews, would result in a 30-year total NPW of \$1,300,000.

Alternative S16-4: Limited Soil Removal and LUCs

The disposal alternative developed for Site 16 would include all components of Alternative S16-2 in addition to off-site disposal of the limited (3 "hot spots") surface and subsurface soil contamination.

The estimated capital cost for initial implementation of the limited soil removal and LUC alternative is \$60,000. The long-term O&M cost, including the cost for 5-year reviews, would result in a 30-year total NPW of \$178,000.

Evaluation of Alternatives

Nine criteria were used to evaluate the remedial alternatives individually and against each other to select a preferred remedy. The relative performance of each alternative against the nine criteria has been evaluated and is summarized below. How each alternative compares to the other options under consideration has also been examined.

The evaluation criteria fall into three groups (Threshold, Primary Balancing, and Modifying) as shown below.

Threshold Criteria:

Overall Protection of Human Health and the Environment – Determines whether an alternative eliminates, reduces, or controls threats to public health and the environment through ICs, ECs, or treatment.

Alternative S16-1 would not be protective of human health and the environment because contaminants would remain in soil at concentrations in excess of their PRGs and SCTLs.

Alternative S16-2 would protect human receptors. Regulatory controls (i.e., LUCs) would prohibit potential future residents from exposure to this site because residential use of this site would be restricted under the proposed LUCs. However, this alternative would not provide protection for ecological receptors at the site.

Alternative S16-3 would provide protection of human receptors. The implementation of a landfill cover and regulatory controls (i.e., LUCs) would prohibit potential human receptors from coming into contact with the soil at Site 16. This alternative would also provide protection for ecological receptors at the site; however, in doing so, this alternative would alter the native ecological habitat present at the site.

Alternative S16-4 would minimize human and ecological exposure to COCs in Site 16 soil. Soil with concentrations of COCs in excess of the FDEP industrial SCTLs would be removed from the site and the resulting excavation would be backfilled with clean fill. As a result, risks posed to human and ecological receptors by exposure to contaminated surface and subsurface soil would be minimized.

Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) – Evaluates whether the alternative meets federal and state environmental statutes, regulations, and other requirements that pertain to the site, or whether a waiver is justified.

Alternative S16-1 would not comply with ARARs (e.g., Florida GCTLs, or Florida SCTLs) in the short term. Eventually, this alternative may comply with ARARs if natural processes including physical, chemical, and biological changes in the soil and groundwater reduce contaminant concentrations.

Alternative S16-2 would comply with chemical-specific ARARs (e.g., SCTLs) and action-specific ARARs at the time of implementation. There are no location-specific ARARs at Site 16.

Alternative S16-3 would comply with landfill closure requirements, as well as Florida Solid Waste Disposal Facilities Regulations. Worker safety standards would be maintained during construction activities to comply with ARARs.

Alternative S16-4 would comply with ARARs. Worker safety standards would be maintained during remedial activities to comply with ARARs.

Primary Balancing Criteria:

Long-Term Effectiveness and Permanence – Considers the ability of an alternative to maintain protection of human health and the environment over time.

Alternative S16-1 – Since no action would be taken, human and ecological risks due to exposure to onsite soils would not be addressed via this alternative. These risks would remain over a period of time until natural processes reduce contaminant concentrations and reduce the mobility of the contaminants.

Alternative S16-2 - Naturally occurring processes, such as biological activity, may reduce organic contaminant concentrations (PAHs) in the soil over the long term but would not reduce inorganic concentrations. The risks

presented to the future resident based on exposure to surface soil at the site would be addressed via the LUCs. The long-term effectiveness and permanence of these controls would be controlled by the facility.

Alternative S16-3 – The soil cover would be a permanent method of reducing human health risks posed by ingestion of surface or subsurface soil if the cover stability is maintained and documented during the 5-year reviews. Similar to human health risk reduction, the soil cover would also be designed to prevent risks posed to ecological receptors.

Alternative S16-4 is expected to provide long-term effectiveness and permanence by excavation and off-site disposal of contaminated surface and subsurface soil. A 5-year site review would be used to assess changes in site conditions to ensure long-term effectiveness and permanence. This alternative can be viewed as a permanent method of reducing human health and ecological risks posed by ingestion of contaminated surface soil by excavation and removal of soil areas.

Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment – Evaluates an alternative's use of treatment to reduce the harmful effects of principal contaminants, their ability to move in the environment, and the amount of contamination present.

Alternative S16-1 may provide some reduction in PAH toxicity through natural degradation processes. No reduction in inorganic toxicity is anticipated. This alternative would not provide a reduction in volume. On the other hand, treatment residuals would not be produced if this alternative was implemented.

Alternative S16-2 also may provide some reduction in PAH toxicity through natural degradation processes. No reduction in inorganic toxicity is anticipated. This alternative would not provide a reduction in volume. On the other hand, treatment residuals would not be produced if this alternative was implemented.

Alternative S16-3 does not include treatment of contaminants and would not physically or chemically alter contaminants contained in the landfills. Thus, this alternative does not reduce the toxicity and/or volume of contaminants through treatment. However, the cover design will effectively reduce the mobility of contaminants contained in surface soil by preventing the spread of wind-blown particulates. The cover will also prevent the uptake of contaminants in surface and subsurface soils.

Alternative S16-4 would reduce the toxicity, mobility, and volume of the waste at Site 16 to the extent of the limited soil removal at the site. The waste would be excavated, transported offsite and disposed of at an approved off-site disposal facility.

Short-Term Effectiveness – Considers the length of time needed to implement an alternative and the risks the alternative poses to workers, residents, and the environment during implementation.



Comments

For your convenience, a public comment form is included with this Proposed Plan. Written comments and requests for more information or a public meeting must be postmarked by 14 September 2008.

Alternative S16-1 would not provide any short-term effectiveness because there would be no action.

Alternative S16-2 would reduce ecological and human health risks in the short term by reducing the potential exposure of human receptors to Site 16 soil.

Alternative S16-3- During the clearing, grubbing, and grading of the site, fugitive dust would be generated, exposing workers to a risk of inhalation. The short-term ecological impacts as a result of clearing and grubbing the site may be significant.

Alternative S16-4- Through implementation of this alternative, there would be an immediate reduction in risk to human health and the environment.

Implementability – Considers the technical and administrative feasibility of implementing the alternative, including factors such as the relative availability of goods and services.

Alternative S16-1 does not require remedial construction for implementation.

Alternative S16-2 requires the installation of LUC warning signs for implementation. Other activities, such as ICs documentation and 5-year site reviews, would be easily implemented.

Alternative S16-3 would be completed in a 2-month period because equipment and materials are readily available to construct the cover designed for this alternative.

Alternative S16-4 would be easily implementable, and the work can be completed within a 2-month period.

Cost - Includes estimated capital and annual O&M costs, as well as NPW costs. Cost estimates are expected to be accurate within a range of +50 percent to -30 percent.

The table below provides a breakdown of the NPW costs for the three alternatives at Site 16:

Alternative	Capital	Total
S16-1	\$0	\$0
S16-2	\$21,000	\$103,000
S16-3	\$979,000	\$1,300,000
S16-4	\$60,000	\$177,000

Modifying Criteria:

State/Support Agency Acceptance - Considers whether the state agrees with the Navy's analyses and recommendations as described in the RI and FS and this Proposed Plan.

Community Acceptance – Following the public comment period, this criterion considers whether the local community agrees with the Navy's analyses and Preferred Alternative. Comments received on the Proposed Plan are an important indicator of community acceptance.

Preferred Alternative

Alternative S16-2 has been selected as the Preferred Alternative for surface and subsurface soil at Site 16. The

recommended alternative will achieve the RAOs and was selected based mainly on implementability and cost.

The USEPA and FDEP concur with the recommended alternative. However, the Navy, in consultation with the USEPA and FDEP will not select a final alternative until public comments have been considered.

Soil Alternative S16-2: LUCs - The Preferred Alternative for Site 16 is LUCs for surface and subsurface soil. LUCs would be implemented to reduce human health risk of exposure to contaminated soil and debris by restricting future use of the site to non-residential or residential-like activities and non-recreational activities, and prohibiting digging at and soil removal from the site.

This alternative consists of the Navy implementing LUCs in the form of both ICs and ECs at the site.

ICs in the form of a residential or residential-like use prohibition, a recreational use prohibition, a digging prohibition, and restrictions on activities that would disturb the site or future signage without prior regulatory notice and concurrence would be implemented to ensure appropriate future land use. Prohibited uses of the site would include, but would not be limited to, residential housing, elementary and secondary schools, child care facilities, playgrounds, and adult convalescent or nursing home facilities.

ECs in the form of warning signs posted along the boundaries of the site would also be implemented. The location, size, and wording to be used on those signs would be agreed on by the Navy, USEPA, and FDEP prior to their posting.

Because this remedy would result in hazardous substances, pollutants, or contaminants remaining on site at levels greater than residential SCTLs, a statutory review would be conducted every 5 years after initiation of the remedy to ensure the remedy continues to be protective of human health and the environment.

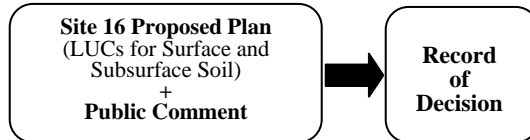
Based on the information currently available, the uncertainty associated with not fully characterizing the Site 16 disposal area, and the exceedence of FDEP SCTLs and risk benchmarks, the Navy believes the Preferred Alternative will satisfy the following statutory requirements of CERCLA Section 121(b): (1) adequately protect human health and the environment; (2) comply with all federal and state requirements (including ARARs); (3) be cost effective; and (4) achieve the RAOs.

Community Participation

Community input on the Preferred Alternative described in this Proposed Plan is the next step. Once any public comments have been reviewed, the Navy, USEPA, and FDEP will assess the need to modify the Preferred Alternative accordingly. After the Proposed Plan is approved, the ROD will be signed by the Navy and USEPA with concurrence by FDEP. The ROD will document the selection of the Preferred Alternative (LUCs for surface and subsurface soil) at Site 16. No other soil cleanup measures at Site 16 will be proposed after approval of the selected remedial alternative.

The Navy has established an active outreach program to ensure community involvement in environmental activities at Site 16 and throughout NAS Whiting Field. The Navy will be accepting written comments on the proposed Site 16 remedial action from August 15 to September 14, 2008. Public participation in the selection is encouraged. Comments can be submitted using the enclosed form. Comments will be summarized and responses will be provided in the Responsiveness Summary section of the ROD.

Community Participation Process



The comment period includes an opportunity to request a public meeting where the Navy would present the RI, FS, and FSA Reports and the Proposed Plan, answer questions, and receive comments in writing from the public. A public meeting will be held if one is requested by members of the public before the end of the comment period.

The NAS Whiting Field RAB is another way the Navy promotes public involvement in the base environmental cleanup program. For example, the RAB has been invited to participate in developing the Preferred Alternative by reviewing associated documents, offering suggestions, and expressing their concerns about the proposed remedial actions. The RAB is provided with periodic updates on the status of ongoing Installation Restoration Program work at NAS Whiting Field. RAB meetings are open to the public and are advertised in local news media.

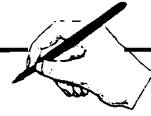


Technical Presentation at a RAB meeting

A community mailing list is also maintained to distribute updates about the environmental program directly to interested members of the community.

All documents and materials discussed in this Proposed Plan are available for review at the **NAS Whiting Field Information Repository, West Florida Regional Library, Milton Branch, 805 Alabama Street, Milton, Florida, 32570; (850) 623-5565.**

If you need additional information, would like to comment on the Preferred Alternative, or would like to request a public meeting, please fill out the attached public comment form and mail to the address below or contact.



**Mr. Michael Pattison
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7151 USS WASP Street
Milton, Florida 32570-6159
(850) 623-7181 (Ext. 18)**

Glossary of Terms

Administrative Record: the complete body of documents pertaining to the investigation and restoration of an environmental site. The body of documents is kept at a location where it can be accessed by the general public.

Applicable or Relevant and Appropriate Requirements (ARARs): the federal, state, and local environmental rules, regulations, and criteria that must be met by the selected cleanup action under CERCLA.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): a federal law enacted in 1980 and amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986. CERCLA, administered by the USEPA and commonly known as Superfund, outlines a process to evaluate hazardous waste conditions that may pose a threat to human health or the environment.

Constituents of concern (COCs): chemicals or constituents detected at levels and/or in locations where they could have an adverse effect on human health and the environment.

Constituents of potential concern (COPCs): chemicals or constituents detected at levels and/or at locations determined during the RI to have the potential for adverse effects on human health and the environment.

Feasibility Study (FS): an engineering report identifying and evaluating the most appropriate technical approaches for addressing contamination at a site.

Hazard Index (HI): the measure of the likelihood of adverse effects occurring to humans from noncancer-causing chemicals.

Human health risk assessment (HHRA): an evaluation of current and future potential for adverse human health effects from exposure to site contaminants.

Information Repository: a public file containing technical reports, reference documents, and other materials relevant to site cleanup.

Institutional Controls (ICs): administrative controls usually in the form of legal documents restricting the acceptable land uses, current or future, for specific sites or parcels of land. Examples would be planning documents stating prohibited or potential land uses with maps or figures indicating site boundaries where the ICs apply.

National Priorities List (NPL): the USEPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term cleanup under Superfund.

Polychlorinated Biphenyls (PCBs): organic compounds consisting of chlorine atoms attached to biphenyl, a molecule composed of two benzene rings each containing six carbon atoms. PCBs were used as coolants and insulating fluids for transformers and capacitors.

Polynuclear Aromatic Hydrocarbons (PAHs): hydrocarbon compounds with multiple benzene rings. PAHs are typical components of asphalts, fuels, oils, and greases. They are also called Polycyclic Aromatic Hydrocarbons.

Preliminary Remediation Goals (PRGs): based on regulatory requirements, USEPA-acceptable risk levels, assumptions regarding ultimate land uses, and contaminant pathways, PRGs establish acceptable exposure levels protective of human health and the environment.

Proposed Plan: a public participation document detailing the proposed response action at a site.

Public comment period: a legally required opportunity for the community to provide written and oral comments on a proposed environmental action at a hazardous waste site.

Record of Decision (ROD): an official document that describes the selected cleanup alternative or superfund remedy for a site. The ROD documents the remedy selection process and is issued by the Navy and the USEPA at the completion of the public comment period after community acceptance of the Proposed Plan.

Remedial Action: the actual construction or cleanup phase following the selection of cleanup alternatives.

Remedial Action Objective (RAO): a cleanup objective agreed on by the Navy and USEPA, in consultation with FDEP. One or more **RAOs** are typically formulated for each environmental site.

Remedial Investigation (RI): an in-depth study to determine the nature and extent of contamination.

Response Action: a federally authorized action to respond to environmental contamination. There are two types: removal action taken over the short term to respond quickly to a more immediate threat, and remedial action involving long-term activities for a more permanent cleanup solution.

Responsiveness Summary: a section of the ROD summarizing the public comments received during the Proposed Plan public comment period and the responses to those comments.

Restoration Advisory Board (RAB): an advisory group composed of regulatory agency representatives, site personnel, and community volunteers who provide input and promote public involvement in cleanup activities.

Risk assessment: a study estimating the potential risk from a site to human health and the environment.

Soil Cleanup Target Levels (SCTLs): target concentration levels established by FDEP (Chapter 62-780, F.A.C.) and determined to be protective of human health and the environment.